

**Amendments to the Claims:**

Claim 1. (Original) A method for preparing silica containing molecular sieves which may be mixed with an organic polymer to create a mixed matrix membrane, the method comprising:

water washing silica containing molecular sieves sufficiently to produce water washed molecular sieves which are substantially free of surface remnants, such that when the water washed molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 110 micro mhos/cm.

Claim 2. (Original) The method of claim 1 wherein:

the conductivity is less than 80 micro mhos/cm.

Claim 3. (Original) The method of claim 1 wherein:

the conductivity is less than 50 micro mhos/cm.

Claim 4. (Original) The method of claim 1 wherein:

the conductivity is less than 30 micro mhos/cm.

Claim 5. (Original) The method of claim 1 further comprising:

a step of washing the silica containing molecular sieves with a basic water solution having a pH of at least 9 prior to the water washing step.

Claim 6. (Original) The method of claim 5 wherein:

the basic water solution has a pH of at least 11.

Claim 7. (Original) The method of claim 1 wherein:

the water washing is performed continuously until the silica containing molecular sieves are substantially free of the surface remnants.

Claim 8. (Original) The method of claim 1 wherein:

the water washing is performed batch wise until the silica containing molecular sieves are substantially free of the surface remnants.

Claim 9. (Original) The method of claim 1 further comprising:

calcining the silica containing molecular sieves after the step of water washing has produced sieves which are substantially free of surface remnants.

Claim 10. (Original) The method of claim 1 further comprising:

silanating the water washed silica containing molecular sieves.

Claim 11. (Original) A mixed matrix membrane comprising:

a continuous phase organic polymer and water washed silica containing molecular sieves which are dispersed throughout the polymer;

wherein the water washed silica containing molecular sieves are sufficiently water washed to remove surface remnants prior to being dispersed into the organic polymer such that if the water washed silica containing molecular sieves

are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 110 micro mhos/cm.

Claim 12. (Original) The mixed matrix membrane of claim 11 wherein:

the water washed silica containing molecular sieves are sufficiently water washed to remove surface remnants prior to being dispersed into the organic polymer such that if the water washed silica containing molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 80 micro mhos/cm.

Claim 13. (Original) The mixed matrix membrane of claim 11 wherein:

the water washed silica containing molecular sieves are sufficiently water washed to remove surface remnants prior to being dispersed into the organic polymer such that if the water washed silica containing molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 50 micro mhos/cm.

Claim 14. (Original) The mixed matrix membrane of claim 11 wherein:

the water washed silica containing molecular sieves are sufficiently water washed to remove surface remnants prior to being dispersed into the organic polymer such that if the water washed silica containing molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 30 micro mhos/cm.

Claim 15. (Currently Amended) The mixed matrix membrane of claim 11 wherein:

the water washed ~~[[silca]]~~ silica containing molecular sieves ~~[[is]]~~ are silanated prior to being dispersed with the organic polymer.

- Claim 16. (Original) A method of making a mixed matrix membrane, the method comprising the steps of:
- water washing silica containing molecular sieves sufficiently to produce water washed molecular sieves which are substantially free of surface remnants, such that when the water washed molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 110 micro mhos/cm;
- dispersing the water washed molecular sieves into a solvated organic polymer; and
- allowing the organic polymer to dry thereby creating a mixed matrix membrane comprising an organic polymer with the water washed molecular sieves dispersed therein.
- Claim 17. (Original) The method of claim 16 wherein:
- the wash filtrate has a conductivity of less than 80 micro mhos/cm.
- Claim 18. (Original) The method of claim 16 wherein:
- the wash filtrate has a conductivity of less than 50 micro mhos/cm.
- Claim 19. (Original) The method of claim 16 wherein:
- the wash filtrate has a conductivity of less than 30 micro mhos/cm.

- Claim 20. (Original) A process for separating component gases of a gas mixture comprising the steps of:
- providing a mixed matrix membrane comprising molecular sieves dispersed in a continuous phase of a polymer in which the sieves have been sufficiently super water washed prior to being incorporated into the continuous phase to be substantially free of surface remnants, such that when the water washed molecular sieves are subjected to a Sieve Wash Conductivity Test, a wash filtrate is produced having a conductivity of less than 110 micro mhos/cm;
- contacting a gas mixture, including component gases, on one side of the membrane to cause the component gases to selectively permeate the membrane; and
- removing from the opposite side of the membrane a permeate gas composition enriched in concentration in at least one of the component gases.
- Claim 21. (Original) The process of claim 20 wherein:
- the wash filtrate has a conductivity of less than 80 micro mhos/cm.
- Claim 22. (Original) The process of claim 20 wherein:
- the wash filtrate has a conductivity of less than 50 micro mhos/cm.
- Claim 23. (Original) The process of claim 20 wherein:
- the wash filtrate has a conductivity of less than 30 micro mhos/cm.